Please amend the application as follows:

Please cancel claims 1-18;

Please add new claims 19-53 as follows:

19. (New) A process for obtaining mammalian insulin secreting cells in vitro, comprising:

a) preparing mammalian pancreatic tissues from a previously removed pancreas;

b) dissociating the pancreatic tissues into isolated pancreatic cells;

c) inducing dedifferentiation of the isolated pancreatic cells into ductal precursor cells; and

d) inducing redifferentiation of the ductal precursor cells into insulin secreting cells.

20. (New) A process according to Claim 19, wherein the dissociation of the pancreatic tissues is carried out by enzymatic digestion.

21 (New) A process according to Claim 19, further comprising eliminating endocrine cells from the isolated pancreatic cells before inducing dedifferentiation.

22. (New) A process according to Claim 21, wherein the elimination of endocrine cells is carried out by means of density gradient centrifugation.

23. (New) A process according to Claim 22, wherein the elimination of the endocrine cells is carried out by withdrawal of a fraction of the endocrine cells recovered in a density range between 1.027 g/L to 1.104 g/L.

24. (New) A process according to Claim 22, wherein the elimination of the endocrine cells is carried out by withdrawal of a fraction of the endocrine cells recovered in a density range between 1.045 g/L to 1.097 g/L.

25. (New) A process according to Claim 22, wherein exocrine cells devoid of endocrine cells are recovered in a pellet as a result of the density gradient centrifugation.

26. (New) A process according to Claim 21, wherein the elimination of the endocrine cells is carried out by means of a cell separator.

27. (New) A process according to Claim 21, wherein the dedifferentiation further comprises:

i) culturing the isolated pancreas cells obtained after the elimination of endocrine cells for a duration of between 4 to 9 days, with a cell concentration between 1×10^6 and 10×10^6 cells/mL, in a culture medium containing glucose at a concentration between 1 and 10 g/l, and a mixture of insulin, transferrin, and selenium at a concentration between 0.2 and 3%; and

ii) recovering ductal precursor cells.

28. (New) A process according to Claim 27, wherein the cells are cultured with a cell concentration between 2×10^6 and 6×10^6 cells/ml.

29. (New) A process according to Claim 27, wherein the glucose is at a concentration between 2 and 5 g/l.

30. (New) A process according to Claim 27, wherein the mixture of insulin, transferrin, and selenium is used at a concentration between 1.0 and 2.5%.

31. (New) A process according to Claim 27, wherein the cells are cultured for a duration between 5 to 7 days.

32. (New) A process according to Claim 27, wherein the culture medium further contains serum, wherein the serum is fetal calf serum, bovine serum or human serum, and wherein the serum concentration is greater than 8%.

33 (New) A process according to Claim 32, wherein the serum is at a concentration between 10 and 15% final volume.

34. (New) A process according to Claim 27, wherein the culture medium further contains factors preventing the growth of fibroblasts, wherein the factors are present at a concentration between 20 and 100 μg/ml.

35. (New) A process according to Claim 34, wherein the factors preventing the growth of fibroblasts are at a concentration between 30 and 60 μg/ml.

36. (New) A process according to Claim 27, wherein the culture medium further contains antibiotics and/or antifungal agents.

37. (New) A process according to Claim 19, wherein the induction of redifferentiation further comprises:

i) separating the ductal precursor cells to obtain separated ductal precursor cells;

ii) culturing the separated ductal precursor cells for a duration between 12 and 36 hours, at cell concentration between 3.5 x 10^5 cells/25 cm^2 and 4 x 10^6 cells/25 cm^2, in a culture medium containing glucose at concentrations between 1 and 10 g/L;

iii) withdrawing said culture medium to obtain non-adherent cells;

iv) culturing the non-adherent cells for a duration between 4 and 12 days, in a culture medium containing glucose at a concentration between 1 and 10g/L to obtain insulin secreting endocrine cells; and

v) recovering the insulin secreting cells.

38. (New) A process according to Claim 37, wherein the separated ductal precursor cells are cultured at a concentration between 7 x 10^5 cells/25 cm^2 to 3 x 10^6 cells/25 cm^2.

39. (New) A process according to Claim 37, wherein the culture medium contains glucose at a concentration between 2 and 5 g/l.

40. (New) A process according to Claim 37, wherein the culture medium contains serum, wherein the serum is fetal calf serum, bovine serum or human serum at a concentration greater than 2.5% of final volume.

41. (New) A process according to Claim 40, wherein the serum is at a concentration between 5 and 15% final volume.

42. (New) A process according to Claim 37, wherein the culture medium contains a mixture of insulin, transferrin, and selenium, at a concentration between 0.2 and 5%.

43. (New) A process according to Claim 42, wherein the mixture of insulin, transferrin, and selenium is at a concentration between 0.5 and 2%.

44. (New) A process according to Claim 37, wherein the culture medium contains antibiotics and antifungal agents.

45. (New) A process according to Claim 37, wherein the ductal precursor cells are cultured in the presence of a matrix.

46. (New) A process according to Claim 37, wherein the culture medium contains growth factors.

47. (New) A process according to Claim 37, wherein the ductal precursor cells are cultured for a duration between 5 and 10 days.

48. (New) A process according to Claim 37, wherein the separation of the ductal precursor cells is done with trypsin at a concentration between 0.01 and 0.1% and EDTA at a concentration between 0.1 and 1 mM.

49. (New) A process according to Claim 37, wherein the trypsin is at a concentration between 0.015 and 0.03% and the EDTA is at a concentration between 0.25 and 0.75 mM.

50. (New) A process according to Claim 45, wherein the matrix is collagen type IV, 804G, collagen type I, or Matrigel.

51. (New) A process according to Claim 19, wherein the pancreatic tissues are obtained from a previous removal of a fragment of a pancreas of a brain dead adult human.

52. (New) A process according to Claim 19, wherein the pancreatic tissues are obtained from a previous removal of a fragment of a pancreas of a living patient suffering from a pancreatic pathology.

53. (New) A process according to Claim 19, wherein the pancreatic tissues are obtained from a previous removal of a fragment of a pancreas of a living patient suffering from diabetes.